

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method of communicating to a mobile node on a communications system having a home network with a home agent and at least one foreign wireless network with a foreign agent, comprising the steps of:

receiving an agent solicitation at the foreign agent where said solicitation is initiated by the detection of movement of the mobile node into said foreign network using protocols operating on the Network Layer (layer 2) and Link Layer (layer 3) level, said solicitation message transmitted either by the transmitter or the mobile node operating in cooperation with the transmitter;

transmitting an agent advertisement from the foreign agent in response to the agent solicitation to the mobile node as a unicast message addressed to the mobile node; and,

transmitting a care-of address to the home agent based upon information in the agent advertisement to support redirection of data packets for the mobile node to the foreign network where the mobile node is located.

2. (Original) The method of Claim 1 further comprising the step of detecting mobile node movement with the mobile node.

3. (Original) The method of Claim 1 further comprising the step of detecting mobile node movement with a cell-site transmitter communicating with the mobile node.
4. (Original) The method of Claim 1 further comprising the step of detecting mobile node movement within the foreign network.
5. (Original) The method of Claim 1 further comprising the step of detecting mobile node movement upon power up of the mobile node in the foreign network.
6. (Original) The method of Claim 1 further comprising the step of initiating the agent solicitation with the mobile node.
7. (Original) The method of Claim 1 further comprising the step of initiating the agent solicitation with a cell-site transmitter communicating with the mobile node.
8. (Original) The method of Claim 1 further comprising the step of de-registering the care-of address upon power down of the mobile node in the foreign network.

9. (Original) The method of Claim 1 further comprising the step of de-registering the care-of address with the home agent after the mobile node returns to the home network.
10. (Original) The method of Claim 9 further comprising the step of detecting mobile node movement with the mobile node.
11. (Original) The method of Claim 9 further comprising the step of detecting mobile node movement with a cell-site transmitter communicating with the mobile node.
12. (Original) The method of Claim 9 further comprising the step of detecting mobile node movement within the foreign network.
13. (Original) The method of Claim 9 further comprising the step of detecting mobile node movement upon power up of the mobile node in the foreign network.
14. (Original) The method of Claim 9 further comprising the step of initiating the agent solicitation with the mobile node.

15. (Original) The method of Claim 9 further comprising the step of initiating the agent solicitation with a cell-site transmitter communicating with the mobile node.
16. (Original) The method of Claim 1 further comprising the step of detecting mobile node movement with a routine performed on a low-level protocol layer.
17. (Original) The method of Claim 16 further comprising the step of detecting mobile node movement with the mobile node.
18. (Original) The method of Claim 16 further comprising the step of detecting mobile node movement with a cell-site transmitter communicating with the mobile node.
19. (Original) The method of Claim 16 further comprising the step of detecting mobile node movement within the foreign network.
20. (Original) The method of Claim 16 further comprising the step of detecting mobile node movement upon power up of the mobile node in the foreign network.

21. (Original) The method of Claim 16 further comprising the step of initiating the agent solicitation with the mobile node.

22. (Original) The method of Claim 16 further comprising the step of initiating the agent solicitation with a cell-site transmitter communicating with the mobile node.

23. (Currently Amended) A method of determining the care-of address for a mobile node in a wireless foreign network, comprising the steps of:

detecting movement of the mobile node into the foreign network
using protocols operating on the Network Layer (layer 2) or Link Layer (layer 3) level;

transmitting an agent solicitation to a foreign agent in the foreign network in response to the detection of movement of the mobile node
[[into]] onto the foreign network coupled to a transmitter to support communication with said mobile node, said agent solicitation transmitted by the transmitter or by the mobile node operating in cooperation with said transmitter;

transmitting an agent advertisement in response to receiving the agent solicitation as a unicast message addressed to the mobile node;

deriving the care-of address for the mobile node from at least a portion of the information in the agent advertisement.

24. (Original) The method of Claim 23 further comprising the step of detecting mobile node movement with a routine performed on a low-level protocol layer.

25. (Original) The method of Claim 23 further comprising the step of detecting mobile node movement with the mobile node.

26. (Original) The method of Claim 23 further comprising the step of detecting mobile node movement with a cell-site transmitter communicating with the mobile node.
27. (Original) The method of Claim 23 further comprising the step of detecting mobile node movement within the foreign network.
28. (Original) The method of Claim 23 further comprising the step of detecting mobile node movement upon power up of the mobile node in the foreign network.
29. (Original) The method of Claim 23 further comprising the step of initiating the agent solicitation with the mobile node.
30. (Original) The method of Claim 23 further comprising the step of initiating the agent solicitation with a cell-site transmitter communicating with the mobile node.

31. (Currently Amended) A system for communicating to a mobile node in a wireless communications network comprising:

 a home network having a home agent coupled to a communications buss line for the home network and a router capable of directing communications to and from the home network;

 a foreign network having a foreign agent coupled to a communications buss for the foreign network, a router capable of directing communications to and from the foreign network, and

 a transmitter capable of performing wireless communications with at least one mobile node located in the transmission range of the transmitter for the foreign network and transmitting an agent solicitation message initiated by the detection of mobile node movement into transmission range for the foreign network by the transmitter or the mobile node in cooperation with the transmitter;

wherein the foreign network transmits an agent advertisement as a unicast message directed to the mobile node in response to [[an]] said agent solicitation initiated by the detection of mobile node movement into transmission range for the foreign network using protocols operating on the Network Layer (layer 2) or Link Layer (layer 3) level.

32. (Original) The system of Claim 31 further comprising the detection of the mobile node movement with the mobile node.

33. (Original) The system of Claim 31 further comprising the detection of the mobile node movement with a cell-site transmitter communicating with the mobile node.

34. (Original) The system of Claim 31 further comprising the detection of the mobile node movement within the foreign network.

35. (Original) The system of Claim 31 further comprising the detection of mobile node movement upon power up of the mobile node in the foreign network.

36. (Original) The system of Claim 31 further comprising initiation of the agent solicitation with the mobile node.

37. (Original) The system of Claim 31 further comprising initiation of the agent advertisement with a cell-site transmitter communicating with the mobile node.

38. (Original) The system of Claim 31 further comprising the agent advertisement possessing a care-of address that identifies the location of the foreign network.

39. (Original) The system of Claim 38 further comprising the mobile node registration of the care-of address with the home agent to support redirection of data packets to the mobile node located on the foreign network.
40. (Original) The system of Claim 39 further comprising the mobile node de-registration of the care-of address with the home agent after the mobile node returns to the home network.
41. (Original) The system of Claim 39 further comprising the mobile node de-registration of the care-of address with the home agent after the mobile node powers down in the foreign network.
42. (Original) The system of Claim 39 further comprising the detection of the mobile node movement with the mobile node.
43. (Original) The system of Claim 39 further comprising the detection of the mobile node movement with a cell-site transmitter communicating with the mobile node.
44. (Original) The system of Claim 39 further comprising initiation of the agent solicitation with the mobile node.

45. (Original) The system of Claim 39 further comprising initiation of the agent solicitation with a cell-site transmitter communicating with the mobile node.

46. (Original) The system of Claim 39 further comprising the detection of the mobile node movement within the foreign network.

47. (Original) The system of Claim 39 further comprising the detection of mobile node movement upon power up of the mobile node in the foreign network.

48. (Original) The system of Claim 31 further comprising detection of mobile node movement with a routine performed on a low-level protocol layer.

49. (Original) The system of Claim 48 further comprising the detection of the mobile node movement with the mobile node.

50. (Original) The system of Claim 48 further comprising the detection of the mobile node movement with a cell-site transmitter communicating with the mobile node.

51. (Original) The system of Claim 48 further comprising the detection of the mobile node movement within the foreign network.

52. (Original) The system of Claim 48 further comprising the detection of mobile node movement upon power up of the mobile node in the foreign network.

53. (Original) The system of Claim 48 further comprising initiation of the agent solicitation with the mobile node.

54. (Original) The system of Claim 48 further comprising initiation of the agent advertisement with a cell-site transmitter communicating with the mobile node.